

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Masao Fukuda, et al.

Attorney Docket No.: ISHD P165

Application No.: 09/372,009

Examiner: C. Harmon

Filed: August 11, 1999

Group: 3721

Title: PACKAGING MACHINE

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Deborah Neill

**TRANSMITTAL OF REVISED APPEAL BRIEF
(37 CFR 192)**

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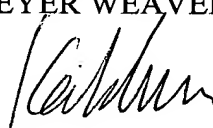
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Sir:

This revised appeal brief is being submitted in response to the Office Communication dated January 23, 2003.

☒ Charge any additional fees or credit any overpayment to Deposit Account No. 500388, (Order No. ISHDP165). Two copies of this transmittal are enclosed.

Respectfully submitted,
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APPELLANTS' BRIEF PURSUANT TO 37 CFR 1.192

Sir:

This brief, transmitted herewith in triplicate, is in furtherance of the Notice of Appeal mailed in the above-referenced application on October 14, 2002. The fees required under 37 C.F.R. 1.17(f) and any other fees required for filing are enclosed.

This brief contains pursuant to 37 C.F.R. 1.192(c) the items under the following headings and in the order set forth below:

- I Real Party in Interest
- II Related Appeals and Interferences
- III Status of Claims
- IV Status of Amendments
- V Summary of Invention
- VI Issues
- VII Grouping of Claims
- VIII Arguments
- IX Appendix of Claims Involved in the Appeal

I. Real Party in Interest

The real party in interest of this application and of this appeal is:

ISHIDA CO., LTD., which is a Japanese corporation doing business at 44 Sanno-cho, Shogoin, Sakyo-ku, Kyoto, Japan and is the assignee in entire rights to this application.

II. Related Appeals and Interferences

There are no other appeals or interferences known to appellant, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

This application was filed with seventeen (17) claims of which two (2) were independent claims (claims 1 and 6).

In response to Requirement for Restriction, Claims 1-5 were withdrawn as non-elected claims.

Claims 6-17 were rejected in an office action dated November 24, 1999. In applicant's response, claims 6 and 12-17 were amended.

Claims 6-17 were rejected in a final office action dated May 3, 2000. In a continued prosecution application filed in response, claims 18-23 were added.

Claims 6-23 were rejected in an office action dated October 18, 2000. In applicant's response, claims 6 and 18 were amended.

Claims 6-23 were rejected in another final office action dated May 31, 2001. In response, a Request for Continued Prosecution was filed with claims 6-23 cancelled and new claims 24-30 introduced, of which one (1) claim (claim 24) was independent.

Claims 24-30 were rejected in an office action dated February 26, 2002. In response, applicant submitted arguments without amending any of the claims.

Claims 24-30 were rejected in still another final office action dated July 18, 2002, and an appeal brief was mailed on October 14, 2002.

The status of the claims as set in said still another final action was and is as follows:

| | |
|--------------------|-----------|
| allowed claims | --- none |
| claims objected to | --- none |
| cancelled claims | --- 1-23 |
| claims rejected | --- 24-30 |

IV. Status of Amendments

Claims 24-30 have not been amended.

The claims as set out in the Appendix are the claims as currently pending.

V. Summary of Invention

This invention relates to a method of longitudinally sealing overlapping side edge portions of an elongated bag-making film material by means of a form-fill-seal type packaging machine 1, as shown in Figs. 1, 2 and 3 of the specification, having a cylindrical chute 4, a former 3 for bending the film material into a tubular form around this chute 4 such that its side edges will overlap, and a heater unit 50 for longitudinally sealing these overlapped side edges of the film. A heater driving means 70 causes the heater unit 50 to undergo a relatively larger-scaled motion from a retracted position away from the chute 4 to a sealing position at which the heater unit 50 contacts the film. This may be effected by supplying air at a relatively large pressure by an air cylinder 71. While the heater unit 50 remains at this sealing position, the compressive pressure applied by the heater unit 50 to the film around the chute 4 is controlled by another air cylinder 66 as shown in Fig. 8 or by the same air cylinder 71 as shown in Fig. 12.

The pressure of air supplied to the air cylinder 66 or 71 for this purpose is regulated to be at a specified relatively lower level by a pressure regulating means 101 controlled by a controller 105. A single air cylinder 71 with two air supply chambers 71c and 71d each separately connected to one of a pair of regulators 101 and 102 as shown in Fig. 8 may be used for moving the heater unit 50 from the retracted position to the sealing position and to adjust the compressive pressure of the heater unit 50 at the sealing position may be used.

VI. Issues

In aforementioned final office action dated July 18, 2002 (hereinafter simply "the Final Office Action"), claims 24-30 were rejected under 35 U.S.C. 103 as being unpatentable over a single reference, i.e., Fukuda (US 5,125,217) (hereinafter "Fukuda"), the Examiner stating that replacing the communicating means of the servo-motor 45 with an additional air cylinder would have been obvious to one of ordinary skill in the art for effectively controlling the position and pressure of the heated belt 55 (lines 8-11 of Paragraph 2 of the Final Office Action) ."

ISSUE 1: WAS IT OBVIOUS TO REPLACE FUKUDA'S SERVO-MOTOR WITH AN AIR CYLINDER?

In said Final Office Action, claims 24-30 were alternatively rejected under 35 U.S.C. 103 over Fukuda in view of Simionato (US. 4,660,356) (hereinafter "Simionato"), the Examiner stating that Simionato has taught that the stroke of cylinders can be calculated and hence using higher and lower air pressures (lines 2-6 of page 4 of the Final Office Action).

ISSUE 2: DOES SIMIONATO'S TEACHING, COMBINED WITH FUKUDA'S DISCLOSURE, PREDICATE THE REJECTION OF CLAIMS 24-30?

Some aspects of these issues were already argued in a document entitled Amendment "G" mailed April 29, 2002, regarding which, however, the Examiner stated in said Final Office Action only that the arguments therein had been fully considered but that they were not persuasive, without giving any reason.

ISSUE 3: HAS THE EXAMINER'S ACTION BEEN COMPLETE ACCORDING TO THE REQUIREMENT PURSUANT TO 37 C.F.R. 1.104(b)?

VII. Grouping of Claims

It is Applicant's intention that all claims 24-30 stand or fall together, as far as the reason of rejection stated in the Final Office Action is concerned.

VIII. Arguments

ISSUE 1: WAS IT OBVIOUS TO REPLACE FUKUDA'S SERVO-MOTOR WITH AN AIR CYLINDER?

Fukuda's servo-motor 45 was evidently mentioned by the Examiner as an example of communicating means replaceable by an air cylinder of the present invention. As can be seen clearly in Fig. 8 of Fukuda, however, this servo-motor 45 is for driving the pull-down belts 30 through the turnbuckle 46 although it also controls the seal belt 55 through the screw axis 59 and the axle bearing 58. In the Final Office Action (at line 6 of Paragraph 2 of the Final Office Action), the Examiner points to Fukuda's disclosure in column 6 at lines 48-51 and argues that Fukuda's servo-motor 45 is adjusted to control the pressure applied on film material S, but Fukuda continues further to say that the sealing by the vertical-seal belt 55 can be "controlled by adjusting the operation of the separation-adjusting servo motor 45" (column 6 at lines 49-51). In other words, the seal pressure is adjusted by adjusting the operation of the "separation-adjusting" servo-motor. The "separation-adjusting" operation by Fukuda's servo-motor 45 corresponds to the step of applying a higher pressure to an air cylinder in claim 24. According to claim 24 in the instant application, a lower pressure is applied in a subsequent step to control the

seal pressure. There is no corresponding operation on Fukuda's servo-motor because the seal-pressure control is effected simultaneously as the "separation-adjusting" operation. In other words, the large-scale motion involved in the separation-adjustment and the small-scale motion involved in the seal-pressure adjustment are effected separately and at different pressures according to the method of claim 24 while Fukuda adjusts the seal pressure as a part of the "separation-adjusting" operation. Thus, the Examiner's statement to the effect that replacement of Fukuda's servo-motor 45 as one kind of communicating means with a cylinder as another kind of communicating means would have been obvious (lines 8-9 of page 2 of the Final Office Action) is too ambiguous and hence clearly meaningless. It is firstly because Fukuda's servo-motor 45 functions as communicating means for both the pull-down belts 30 and the seal belt 55 but the Examiner is not considering the dual operations. It is secondly because the Examiner is not considering other consequences and additional considerations accompanied by the proposed replacement of Fukuda's servo-motor 45 with an air cylinder such as pressure of air to be supplied.

ISSUE 2: DOES SIMIONATO'S TEACHING, COMBINED WITH FUKUDA'S DISCLOSURE, PREDICATE THE REJECTION OF CLAIMS 24-30?

Simionato was cited as the secondary reference evidently for disclosing so-called double-acting cylinders 10 but Simionato's cylinders are for feeding the bag-making material. Nowhere does Simionato mention the controlling of the sealing pressure. The Examiner pointed to column 4 at lines 9-11 of Simionato (line 4 of page 4 of the Final Office Action) for disclosing that the stroke of the cylinders 9 can be calculated, but it is for adjusting the "feeding pressure" (column 4, line 11), not the seal pressure. Indeed, Simionato characterizes his cylinders 9 and 10 as being able "to effect longer movements of the slides 7" (column 3, lines 5-11) but nowhere refers to the adjustment of seal pressure. As discussed above, Fukuda's servo motor 45 is for driving the pull-down belts 30 and the seal pressure is adjustable only as a part of its

"separation-adjusting" operation. In other words, Fukuda does not disclose adjustment of the seal pressure independent of the driving of the pull-down belts or the adjustment of the separation of the seal belt. Neither does Simionato disclose such independent control of the feeding pressure and the seal pressure. These two references thus relating to different aspects of control of a form-fill-seal packaging machine, it was not obvious to "replace" (as suggested by the Examiner") Fukuda's servo-motor with Simionato's double cylinders. Moreover, since neither Fukuda nor Simionato even hints at independent controls of the feeding pressure and the seal pressure, even if Fukuda's servo-motor were replaced with Simionato's double cylinders, the resultant change would be only that the pull-down belts are now driven and the feeding pressure is controlled by the cylinders, instead of the servo-motors, and the concept of independently controlling these pressures would remain alien.

ISSUE 3: HAS THE EXAMINER'S ACTION BEEN COMPLETE ACCORDING TO THE REQUIREMENT PURSUANT TO 37 C.F.R. 1.104(b)?

As discussed above, the method according to the rejected claims is characterized as controlling the large-scale motion of the pull-down belts at a relatively higher pressure and its smaller-scale motion to control its seal pressure at a relatively lower pressure and further by controlling this lower pressure. This is done because the pull-down belts cannot be efficiently driven at a lower pressure which may be adequate for controlling the seal pressure and the seal pressure cannot be controlled accurately enough at a higher pressure adequate for the driving of the pull-down belt. It is very much like using an ax to fell a tree and using a pocket knife to sharpen a pencil and controlling the pocket knife to accurately sharpen the pencil, instead of using a single cutting utensil both for felling a tree and sharpening a pencil. Throughout the prosecution of the instant application, arguments to this effect were being presented but the Examiner never commented on this line of argument. With an examiner concluding authoritatively that the arguments were not persuasive (Paragraph 5 of the Final Office Action)

and without any explanation as to why the examiner considers applicant's arguments not persuasive, there is no room for intelligent argument between the Patent Office and an applicant. Thus, the Examiner's action is not believed to have been in conformance with the mandate of 37 C.F.R. 1.104 in which completeness of examiner's action is required.

CONCLUSION

ISSUE 1 indicates that the Examiner is coming to a simplistic conclusion that it is obvious to replace one motion-communicating means by another and hence that it is obvious to replace a servo-motor for driving pull-down belts with an air cylinder for adjusting the seal pressure. This is comparable to concluding that it is obvious to replace an ax for felling a tree with a pocket knife for sharpening a pencil because they are both cutting tools. The Examiner's rejection of claims 24-30 in Paragraph 2 of the Final Office Action should be reversed.


ISSUE 2 indicates that the two cited references were improperly combined, and even if they are considered together in a combination, the invention as in the rejected claims does not result because neither of these references teaches adjusting the separation of the seal belt and controlling the seal pressure independently.

ISSUE 3 indicates that the Examiner's action was not complete within the meaning of 37 C.D.R. 1. 104, thereby leaving appellant helpless in further responding to the office action.

Rejection of claims 24-30 should be reversed, and at least the finality of the rejection should be removed.

Respectfully submitted,

Dated: February 3, 2003.



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Atty. Docket: ISHD P165

IX. Appendix of Claims Involved in the Appeal

24. A method of longitudinally sealing overlapping portions of a tubularly formed bag-making material by means of a heater unit at a sealing position, said method comprising the steps of:

moving said heater unit from a retracted position to said sealing position by supplying air at a higher pressure to an air cylinder which serves to move said heater unit reciprocatingly between said retracted position and said sealing position; and

thereafter supplying air at a lower pressure which is lower than said higher pressure to said air cylinder and controlling said lower pressure to cause said heater unit to longitudinally seal said bag-making material at a specified sealing pressure.

25. The method of claim 24 wherein air at said lower and higher pressures is supplied from a single air source and by varying the pressure of air at said air source to said lower and higher pressures and by using a switch means for selectively providing air at said lower pressure or said higher pressure.

26. The method of claim 24 wherein said specified sealing pressure is selected according to thickness of said bag-making material.

27. The method of claim 24 wherein said specified sealing pressure is selected according to a material characteristic of said bag-making material.

28. The method of claim 24 wherein said air cylinder has a first chamber and a second chamber, said first chamber serving to supply air for moving said heater unit to said

retracted position, said second chamber serving to supply air for moving said heater unit to said sealing position.

29. The method of claim 28 comprising the step of supplying air of said lower pressure into said second chamber of said air cylinder to control air pressure for sealing said bag-making material longitudinally at said specified sealing pressure.

30. The method of claim 24 wherein air of said higher pressure is supplied to said air cylinder for a specified length of time while air of said lower pressure is supplied to said air cylinder.